b) orientating the polycrystalline p-CdTe side of the CdS/CdTe device to face apparatus capable of generating Ar atoms and ions of preferred energy and directionality;

c) introducing Argon and igniting the area of apparatus to generate Ar atoms and ions of preferred energy and directionality in a manner so that during ion exposure, the source-to-substrate distance is maintained such that it is less than the mean-free path or diffusion length of the Ar atoms and ions at the vacuum pressure; and

d) allowing exposure of the polycrystalline p-CdTe side of the layer to said ion beam for a period less than about 5 minutes[.] prior to forming a contact interface or semiconductor layer.

REMARKS

Applicant's attorney acknowledges with appreciation, the courtesy extended by Examiner Mulpuri in granting the discussions based upon the proposed amendment and to hear applicant's representative's indication that there are basically three principle issues or problems which the invention's dry process solves.

As promised to Examiner Mulpuri, the three principle issues or problems are as follows:

1) it is especially difficult in the case of polycrystalline p-type CdTe surfaces to make low-resistance electrical contacts with a metal because of the inability of the polycrystalline p-type CdTe to sustain sufficiently high p-type carrier concentration to enable quantum-mechanical tunneling of charged carriers at the CdTe/metal contact interface (see page 4, lines 8-24);

2) the polycrystalline p-type CdTe material used as the absorber in a CdS/CdTe photovoltaic device physically treated with Cl-containing liquids prior to formation of ohmic contact at the CdTe surface is rich in Cl and this coupled with the fact that the formation of oxide layers from atmospheric oxygen alters the chemical properties of the polycrystalline p-type CdTe surfaces of the electrical transport at the contact interface (which in turn alters the characteristics of the ohmic contact) necessitates removal of the contaminated surfaces by wet chemical treatments; and

3) these wet chemical treatments make it difficult to control uniformity and reproducibility of the ohmic contact (see page 11, lines 9-20).